

PATENT COOPERATION TREATY

PCT


INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 11 APR 2005

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Applicant's or agent's file reference WO 21.1041		FOR FURTHER ACTION		See Form PCT/PEA/416
International application No. PCT/EP2004/003660		International filing date (day/month/year) 02.04.2004	Priority date (day/month/year) 02.05.2003	
International Patent Classification (IPC) or national classification and IPC E21B47/01				
Applicant SERVICES PETROLIERS SCHLUMBERGER et al.				
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 6 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> sent to the applicant and to the International Bureau) a total of sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>				
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input checked="" type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application</p>				
Date of submission of the demand 25.11.2004		Date of completion of this report 08.04.2005		
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465		Authorized Officer Stroemmen, H. Telephone No. +49 89 2399-7345		



**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/EP2004/003660

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:

- ☐ international search (under Rules 12.3 and 23.1(b))
- ☐ publication of the international application (under Rule 12.4)
- ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

Description, Pages

1-11 as originally filed

Claims, Numbers

1-14 as originally filed

Drawings, Sheets

1/5-5/5 as originally filed

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing *(specify):*
- ☐ any table(s) related to sequence listing *(specify):*

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing *(specify):*
- ☐ any table(s) related to sequence listing *(specify):*

* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/EP2004/003660

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	13
	No: Claims	1-12, 14
Inventive step (IS)	Yes: Claims	
	No: Claims	1-14
Industrial applicability (IA)	Yes: Claims	1-14
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

Reference is made to the following documents:

D1: WO 01/77711 A

D2: US-A-4 738 812

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

V-1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT. This can be seen from the following novelty analysis with respect to document D1 which discloses the following (the references in parentheses applying to this document):

An apparatus for investigating the wall of a borehole in a geological formation (p. 6, l. 9 to p. 7, l. 11), the apparatus comprising:

- a pad (fig. 2, item 3) having an inside face (8) and an outside face (at 4, 5, 6) for pressing against the wall (2) of the borehole;
- a set of measurement electrodes (6) mounted on the outside face of the pad (3) and means (7) for measuring the potential difference between two measurement electrodes (6);
- both a source electrode (4) adapted to inject current into the formation and a return electrode (5), the set of measurement electrodes (6) being situated between the source electrode (4) and the return electrode (5);

characterized in that said pad (3) further comprises shielding means which are arranged between the source electrode (4) and the measurement electrodes (6) and between the measurement electrodes (6) and the return electrode (5), said shielding means being flush with or almost flush with the outside face of the pad (fig. 4, p. 10, l. 7-14).

V-2 Also D2 disclosed the distinguishing features of claim 1. See for instance D2,

fig. 2, where the measuring electrodes (M, N) are shielded from the source and return electrodes respectively. Claim 1 is therefore also not new over D2 (Article 33(2) PCT).

- V-3 Dependent claims 2-6 relate to the feature of having the pad made of conductive material. The pad of D1 is also made of conductive material (see for instance claim 5 of D1. Said claims are therefore also not new (Article 33(2) PCT).
- V-4 Dependent claims 7-10 relate to the feature of having conductive sheets isolating certain parts of the pad as has already been discussed under Section V-1. See again fig. 4 of D1. Said claims are therefore also not new (Article 33(2) PCT).
- V-5 The subject-matter of claims 11 and 12 is also disclosed in claim 11 of D1. Said claims are therefore also not new (Article 33(2) PCT).
- V-6 The subject-matter of claim 13 is obvious in light of the disclosure of D1 when taken alone. See Claim 7 of D1 where the location of the electronics in the pad is disclosed. Said claim does therefore not involve an inventive step (Article 33(3) PCT).
- V-7 Independent method claim 14 corresponds effectively to the same subject-matter as claimed in claim 1. Said claim does therefore also not meet the PCT requirements of Article 33(2) in relation to novelty over either of the documents D1 or D2.

Re Item VII

Certain defects in the international application

VII-1

The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).

VII-2

Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the documents D1-D2 is not mentioned in the description, nor are these documents identified therein.

Re Item VIII

Certain observations on the international application

- VIII-1 The term "almost" used in at least claim 1 is vague and unclear and leaves the reader in doubt as to the meaning of the technical features to which it refers, thereby rendering the definition of the subject-matter of said claim unclear, Article 6 PCT. See also the PCT Guidelines